

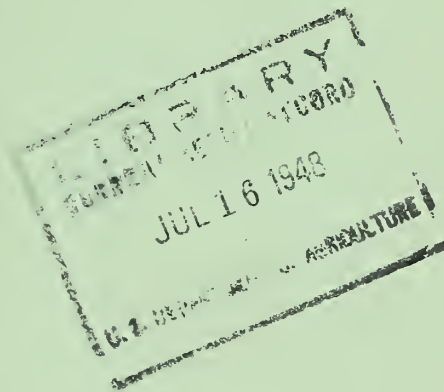
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CAREERS

IN

SOIL CONSERVATION



U. S. DEPARTMENT OF AGRICULTURE
Soil Conservation Service
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Foreword

This pamphlet has been prepared for the information of those young people who are in the process of looking for a career that they can prepare for and devote their life to with the assurance that they will be doing work that will be of tremendous benefit to their fellow man and a great personal satisfaction to themselves.

The job of soil conservation that still needs to be done in this country and throughout the world is tremendous. We have really only scratched the surface. Soil erosion affects so many aspects of our national life - its farms and ranches, its rivers and harbors, its ponds and reservoirs for power and water supply, and its railroads and highways -- that it challenges the best abilities of people to work out the solution to these problems.

WHAT IS SOIL EROSION?

Soil is not permanent. Under many conditions it is extremely unstable. When wind or water moves across bare soil each usually carries some soil with it. They may move it hundreds of miles or only a short distance, but they carry away large amounts of soil unless it is tied down by a dense plant growth or other cover. Where land is cultivated or otherwise left bare, accelerated erosion occurs -- we usually call this man-made erosion. Unless it is checked, it may ruin productive land in a relatively short period of time.

Accelerated soil erosion (induced by man) has made much of the formerly good agricultural land of the world unproductive -- all across the continent of Asia and into Europe and Africa we find lands that once supported advanced civilizations that are now among the backward areas because the land was misused and allowed to wash or blow away. We even have such areas in the United States. After the productive topsoil has been removed by water or wind, the relatively sterile subsoil will seldom support more than a small population and usually they must live in poverty



There are only about 4 billion acres of immediately arable land in the world. The productivity of a great part of this land is only fair to medium. Some is poor. Yet we must count on this land to feed a world population of more than 2 billion people that is increasing at the rate of about 20 million per year. This gives us less than 2 acres of productive land for each person in the world, which is not enough to furnish an adequate diet for all the people.

The United States is better off, from the standpoint of productive land, than most nations. But even here we cannot hope to maintain our present standard of living if we continue to permit our land to deteriorate. Records show that we have ruined, for further practical cultivation, about one-fifth of our original area of tillable land. About a third of what remains has already been badly damaged and another third is highly vulnerable to erosion. And each year the cost of soil erosion, to farmers and the public in general, is estimated at considerably more than a billion dollars.

Soil that is washed from the fields and pastures of our farms becomes erosion debris that piles up in reservoirs, covers productive bottomlands with sterile silt, clogs drainage and irrigation ditches, obstructs streams and harbors, and chokes or smothers the fish and wildlife of the streams. Furthermore, soil erosion from farmlands helps to contribute to flood damage downstream. The excess runoff increases the volume of floodwaters on major streams; the erosion debris helps to swell the total volume of floodwaters; and the silt left behind, adds to the expense of cleaning up the flooded areas.

WHAT IS SOIL CONSERVATION?

Soil conservation is the proper use and care of the land. It means using the land to produce the greatest amounts of the things we need and at the same time protecting the land so it will not lose its productiveness. Soil conservation is one of the youngest of the agricultural sciences and one of the most exacting. Real, permanent conservation must be well planned and executed in accordance with sound scientific principles. At the same time it must be reduced to simple, practical terms and methods so that the farmers who work the land may understand it and use it as a part of their everyday operations.

Effective control of erosion and conservation of water requires the use and treatment of each class of land according to its needs and capabilities. It is probably safe to say that no two parcels of land are exactly alike. Each small field or pasture is apt to be different from other fields either in soil type, slope, kind and degree of erosion, past use, or location with respect to other lands. Hence, each field -- even each important part of a field, pasture, or woodlot -- requires its own particular conservation treatment. Each acre should be used for things it is best suited to do and protected according to its needs.



All measures that help to keep the land productive are tools of conservation. Terraces, contouring, strip cropping, organic matter, grass, legumes, trees, shrubs, crop rotations, fertilizers, drainage, and irrigation -- all of these and whatever else is needed are tools of conservation. It is conservation whether these tools are used singly or in combination, one supplementing another. In other words, soil conservation includes any and all measures that will make the land produce more and at the same time preserve it for future use.

Scientific soil conservation, as practiced by trained conservationists, is the cheapest and most effective way of protecting land from destruction erosion and is also one of the best ways of increasing the productivity of the land. Proper conservation farming practically always results in increased yields per acre. It causes greater diversification and a more stable income for those farmers and ranchers who practice it. And it assures a more stable and prosperous community, state, or nation.

Furthermore, soil and water conservation on farm and range lands helps to control floods and prevents excessive siltation of our streams, harbors, and reservoirs. It also improves conditions for fish and wildlife and adds to our recreational facilities.

WHAT IS THE JOB OF A SOIL CONSERVATIONIST?

WHAT TRAINING DOES HE NEED?



A soil conservationist is a special kind of a technician with skills in many related agricultural fields. His principal job is to work with farmers and ranchers who cooperate with soil conservation districts. He helps them to analyze their farming and land use problems and works out with them ways and means of planning and installing soil and water conservation practices that will conserve their soil and moisture and provide a profitable operation of the farm enterprise. He must be able to deal effectively with rural people both individually and in groups.

A farm planner must thoroughly understand the farming and ranching as a business enterprise in the area in which he is working. He must also be able to interpret from maps such physical information about the land as the kind of soil, degree of erosion, slope, degree of wetness and the condition of ranges and pasture and other land use information so that the capability of the land for continuous production without impairment can be determined. He must understand the action of wind and water and its effect on land and crops. By bringing together the information from many technical fields he can then assist the farmer or rancher to prepare a conservation farm plan that will be both practical and profitable.

Ideally, the best training a man could have for work as a soil conservationist and particularly as a farm planner would be education and experience that would give him a good working knowledge of farming or ranching as business enterprises; that would include soil management, crops and livestock plus a knowledge of farm woodland, range, pasture and wildlife management problems. In addition to that he would need enough engineering training to understand the movement, action and control of water under various conditions on the farm or ranch and also how to use farm or construction machinery to build various types of conservation structures.

Some aspects of the soil conservation job are highly specialized both in operations and in research and call for training in special fields. In fact, most conservationists started in one of the specialized fields and through experience and training on the job have gained the necessary skill to become good all-round conservationists. For example, soil scientists are needed to collect physical data on which conservation farm planning is based. Those whose major experience and training have been in soils and closely related subjects, and who understand the relationship of soils and plants to each other, find opportunities for work in that field. Engineers are needed to solve problems of safe water disposal and utilization through the use of various mechanical and vegetative measures. Agricultural and civil engineers whose training and experience has been directed toward the solution of drainage and irrigation problems or in planning, designing and constructing various types of hydraulic projects involving earth moving and

reinforced concrete construction are needed in soil conservation work. Foresters whose training and experience has been directed toward the solution of farm woodland problems are used in soil conservation work in many parts of the United States. Likewise, biologists whose training and experience has given them a good working knowledge of the relationship of wild animals to land use and conservation problems on farms or ranches will find opportunities in soil conservation work.

In the western, southwestern and southeastern parts of the United States there is need for range management specialists whose training and experience has fitted them to advise farmers and ranchers on plans for stocking, grazing and managing their ranges and pastures.

Agronomists, though not ordinarily employed in that speciality but rather as soil conservationists, are needed. So also are economists whose training and experience has been in farm management or rural economics and who know the relationship of the farm business to land use problems and its effect on soil conservation and flood control work.

Other Requisites for Success

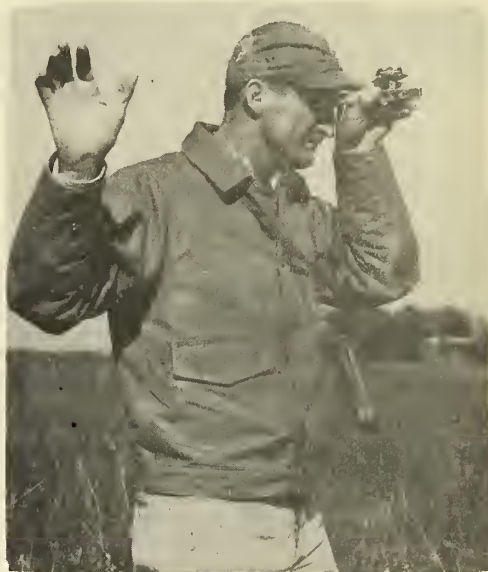
To be a good soil conservationist a man should have a deeply ingrained love for the land and a thorough appreciation of the need for using wisely all of our basic natural resources.

He should be physically capable of handling himself in all kinds of weather and in driving and walking over all kinds of rough terrain, climbing hills and over fences.

He should be able to deal with all kinds of people, in order to persuade them to adopt conservation measures and help them with their problems. He is called upon to meet with boards and commissions, address public meetings and conduct business meetings of all kinds.

He should be a man of integrity and intelligence who is emotionally stable and can win the confidence of practical farmers and ranchers. He should be practical and industrious, not afraid to get his hands or clothes soiled on occasions to lend a helping hand to get a job done.

It helps considerably if a conservationist has been raised on a farm or worked or lived in a rural community. At least his experience must have been such that he has become thoroughly familiar with farmer's problems.



CAREERS IN THE SOIL CONSERVATION SERVICE

The Soil Conservation Service of the United States Department of Agriculture employs the largest group of people directly engaged in soil conservation activities. Some few with soil conservation training are employed in other agencies of the Department and in other agencies of the Federal Government. The Soil Conservation Service is a federal agency and as such is subject to the rules and regulations of the Federal Civil Service, which requires that all new employees be selected from those who have successfully passed the necessary Civil Service examinations.

The Soil Conservation Service is a career service organization. As such its policy is to employ people in the lower grades and promote them to positions of higher responsibility in the organization as they gain skill and experience. The Service employs the following types of people:

Professional Employees

Most professional employees are hired in the beginning professional grade (P-1) as agronomists, soil conservationists, agricultural or civil engineers, soil scientists, foresters, biologists, or range conservationists from registers that have been established as a result of Civil Service examinations. Employees in this category must have had a college training or the equivalent of college training in education and experience. From this group, employees with special aptitudes are promoted to positions of greater technical or administrative responsibility as they demonstrate good performance of their work.

Subprofessional Employees

The main duties of subprofessional employees are to assist professional employees with the details of farm planning or other types of soil conservation planning and assist farmers to install conservation practices on the land. Such employees are usually employed in the lower subprofessional grades and promoted within the subprofessional series to positions of more responsibility.

Other employees in this classification are employed as draftsmen or engineering aids to assist with the mapping and engineering work of the Service.

Clerical, Administrative and Fiscal

The Soil Conservation Service uses employees in this classification in its offices in Washington and in the field. A wide range of work is included, such as stenographic, clerical, statistical, personnel, fiscal and budgetary, and procurement activities. Ordinarily, new employees are started out in the lower grades. Opportunities for advancement into the administrative field are provided, as the employees gain supervisory ability, specialized experience, and thorough knowledge of the soil conservation program.

Civil Service Pay Scales

Salaries in civil service positions range from \$2644.80 for the P-1, beginning of the professional grade, to \$9975.00 per annum for P-8 which is the top grade in the series. The subprofessional grades range from SP-1 at \$1690.00 to SP-8 at \$3397.20 per annum. CAF-1 starts at \$1756.00 and goes to CAF-15 at \$9975.00 per annum.

Benefits under Civil Service

All salaries are subject to retirement deductions and all permanent employees have the full privileges of retirement benefits as provided for under the Civil Service Retirement Act.

Employees are protected by Employment Compensation for injury on the job and are eligible for sick and annual leave privileges as provided by law.

Further Information

For further information regarding qualifications for education and experience for any of the positions listed above see the Civil Service Commission announcement of examinations for Junior Agricultural Assistants and others which can be obtained from any Civil Service office.

OPPORTUNITIES OUTSIDE OF THE FEDERAL SERVICE

Opportunities to advance in a soil conservation career are by no means limited to the federal service. Career frontiers for trained conservationists have been expanding in many directions not only in this country but also in foreign lands.

State Soil Conservation Committees or Conservation Commissions, in most states employ one or more soil conservationists. Some of the 1900 existing soil conservation districts now employ a professional conservationist and it is expected that many more will do so as the districts become older and funds are made available.

Universities, Agricultural Colleges, and Teacher's Colleges throughout the nation are adding soil conservationists to their faculties, to teach soil conservation and closely related subjects.

Commercial and Industrial Firms have been adding trained soil conservationists to their staffs more and more each year. Some of the types of organizations that now employ conservationists are: farm journals and magazines, banks and banker's associations, farm machinery manufacturers, seed and fertilizer companies, railroads, gins and cottonseed oil mills, insurance companies, construction companies, oil companies, and light and power companies.

Voluntary Conservation Associations and Civic Clubs of many kinds now employ trained soil conservationists. Chambers of Commerce and other civic clubs in many cities now employ a conservationist to assist their executive secretary. Several state and national voluntary conservation associations, such as "Friends of the Land" and the "National Wildlife Federation" now employ a soil conservationist as executive secretary or in some other capacity.

Foreign Countries have employed many soil conservationists from the United States during recent years. The demand is becoming greater each year, especially for conservationists who can speak a foreign language.

If you are interested and want further information:

Write or call the Soil Conservation Service at any of the offices listed below and they will gladly assist you further.

Region 1, Regional Office,
Upper Darby, Pennsylvania

Storrs, Connecticut
Newark, Delaware
College Park, Maryland
Orono, Maine
Amherst, Massachusetts
Durham, New Hampshire
New Brunswick, New Jersey
Ithaca, New York
Harrisburg, Pennsylvania
Kingston, Rhode Island
Burlington, Vermont
Morgantown, West Virginia

Region 2, Regional Office,
Spartanburg, South Carolina

Auburn, Alabama
Gainesville, Florida
Athens, Georgia
Lexington, Kentucky
Jackson, Mississippi
Raleigh, North Carolina
Columbia, South Carolina
Nashville, Tennessee
Blacksburg, Virginia

Region 3, Regional Office,

Milwaukee, Wisconsin
Urbana, Illinois
Lafayette, Indiana
Ames, Iowa
East Lansing, Michigan
St. Paul, Minnesota
Columbia, Missouri
Columbus, Ohio
Madison, Wisconsin

Region 4, Regional Office,
Ft. Worth, Texas

Little Rock, Arkansas
Alexandria, Louisiana
Oklahoma City, Oklahoma
• Temple, Texas

Region 5, Regional Office,
Lincoln, Nebraska

Salina, Kansas
Bozeman, Montana
Lincoln, Nebraska
Bismarck, North Dakota
Huron, South Dakota
Laramie, Wyoming

Region 6, Regional Office,

Albuquerque, New Mexico
Phoenix, Arizona
Ft. Collins, Colorado
Albuquerque, New Mexico
Salt Lake City, Utah

Region 7, Regional Office,
Portland, Oregon

Berkeley, California
Boise, Idaho
Reno, Nevada
Corvallis, Oregon
Pullman, Washington

